

Ascaris, the eggs of this parasite perished in less than four months after their immersion in water. During the interval the jar had been upset and most of its contents lost.

12. *Prosthecosacter inflexus*.—The ova of this viviparous species continued to develop their contents after deposition in water, the embryos displaying signs of growth during a period of several weeks subsequent to their escape from the chorionic envelope.

A List of Diurnal Lepidoptera collected by Mr. WALLACE in the Eastern Archipelago. By W. C. HEWITSON, Esq., F.L.S.

[Read Dec. 15, 1864.]

THE very valuable collections of Satyridæ, Erycinidæ, Lycænidæ, and Hesperidæ amassed by the indefatigable industry of Mr. Wallace having been transferred to my keeping, I am happy to comply with his wishes by compiling a list of the species, with notice of all their varieties and localities.

Fam. SATYRIDÆ.

Gen. DEBIS, *Boisduval*.

DEBIS ISANA, *Kollar, in Hugel's Reise*, pl. 16. figs. 3, 4. Java.

DEBIS EUROPA, *Fabricius*.—Java.

Var. ARETE, *Cramer*, ♂. Bouru; Macassar; Amboyna.

Females with the transverse band of the anterior wing broader, more irregular, and less clearly defined on its outer border than in the figures of *Cramer* and *Hübner*. Bourou.

DEBIS ARCADIA, *Cramer*, pl. 116. Bali; Sumatra.

DEBIS MEKARA, *Moore*. Sumatra.

Gen. CYLLO.

CYLLO LOWII, *Doubleday & Hewitson, Gen. Diurn. Lep.* pl. 61. fig. 4. Sarawak; Sumatra.

CYLLO AMABILIS, ♀, *Boisduval, Voy. Astrolabe*, pl. 2. figs. 1, 2.

Male with the transverse band of the anterior wing ochreous yellow. Bouru; New Guinea; Dorey; Amboyna.

Var. *Male and female*. With the transverse band narrower; the eyes on the underside of the posterior wing much larger. Ceram.

CYLLO CONSTANTIA, ♀, *Cramer*, pl. 133. Dorey; Amboyna.

Male. Above differs from the female only in having the transverse band more rufous and nearer to the apex, the underside darker, with the eyes of the posterior wing much larger and more distinct.

Var. *Male*. With the transverse band much narrower, ill-defined, and clouded. Amboyna; Mysol.

Var. *Male*. With the transverse band obscured and scarcely seen; the eyes on the underside of the posterior wing smaller. Aru; Batchian; Salwatty.

CYLLO LEDA, *Linnaeus*.

C. Banksia, *Fabr.* *C. Helena*, *Westwood*. *M. Vamana*, *Ambasara*, *Bela*, *Sugudana*, *Varaha*, *Gokala*, and *Suradeva*, *Horsf. & Moore*, *Cat. Lep. E. I. C.* pp. 223, 224. *C. Atrax*, *Erichsonia*, and *Boisduvalia*, *Felder*.

Specimens (males) resembling the figures 3 & 4, *Oreas marmorea Leda* (*C. Helena*, *Westw.*), of Hübner's *Sammlung*, which I believe represent the male. From Bouru, Timor, Batchian, Ceram, Waigiou. Females of the above with the wings truncate, paler, and more ochreous on both sides, resembling Cramer's fig. A. pl. 292. From Bouru, Batchian, and Gilolo.

Specimens of both sexes resembling figs. 1, 2, *Oreas marmorea Leda*, of the same plate of Hübner's *Sammlung*. From Timor, Flores, Sumatra, and Singapore.

Specimens of both sexes resembling fig. B of Cramer, pl. 292. From Amboyna, Tondano, and Java.

One specimen (male) exactly resembling the first-described (Hübner's *Samml.* figs. 3, 4) on the upperside, and on the underside as much like the other figures 1 & 2 of the same plate but without any of the ocelli. From Tondano.

Specimens of *Suradeva*, Moore, from Java and Malacca.

I feel sure that any one who will sit down with a large series of *Cyllo Leda* and *C. Banksia* before him, and unprejudiced by what has been done before, must come to the same conclusion which I have done, that they and their endless varieties are one and the same species. I cannot find any line of demarcation by which to make a satisfactory separation. Both of them vary in contour from the triangular anterior wing with its pointed apex and straight outer margin to the same wing truncated at the apex and projected in some cases to a point below the apex. Both have and are also without the ocelli of the underside, which has hitherto been the chief characteristic of *Cyllo Leda*. I believe that *C. amabilis* and *C. Constantia* might be better placed as varieties of this species.

Gen. CÆLITES, *Westwood*.

CÆLITES EPIMINTHIA, *Westwood*, in *Doubleday & Hewitson's Gen. Diurn. Lep.* p. 368.

Gen. RAGADIA, *Westwood*.

RAGADIA CRISIA, *Hübner, Zutr. figs. 675, 676*. Sumatra; Java; Sarawak; Singapore.

Gen. ERITES, *Boisduval*.

ERITES MADURA, *Horsfield, Cat. Lep. E. I. C. p. 5*. figs. 8, 8a.

Var. *Male and female*. With five ocelli on the anterior wing, one large and four small. Sumatra; Singapore.

Var. *Male and female*. With the five ocelli of the anterior wing small and of equal size. Singapore; Sarawak.

This genus differs very slightly from *Euptychia*.

Gen. MYCALESIS, *Hübner*.

MYCALESIS DORICUS, ♀, *Boisduval; Hewitson, Ex. But. iii*. Mycalesis, ii. figs. 7-10. Males with the anterior wing uniform dark brown. Waigiou; Aru.

Var. *Male*. With the orange band on the anterior wing as in the female. New Guinea; Mysol; Dorey.

Var. *Male*. Of a paler brown; the lower ocellus of the anterior wing bordered with yellow above as well as outwardly; the outer half of the posterior wing orange-yellow, and like that of the female without the brown border. The underside much paler, almost white. Aru.

MYCALESIS MUCIA, *Hewitson, Ex. But. iii*. Mycalesis, ii. figs. 11, 12. Aru.

MYCALESIS MESSENE, *Hewitson, Ex. But. iii*. Mycalesis, ii. figs. 8, 9. Morty; Gilolo; Ternate; Batchian.

MYCALESIS CYAMITES, *Boisduval, Voy. Astrolabe, p. 152*. New Guinea; Dorey.

MYCALESIS MEHADEVA, ♂, *Boisduval, Voy. Astrolabe, p. 151*. Dorey.

Var. *Male*. With the ocellus of the anterior wing obscured by black. New Guinea; Mysol.

Var. *Male*. With more than half of the anterior wing black; the underside much darker and beautifully tinted with purple. Waigiou.

Female paler brown; the anterior wing with two ocelli, one near the apex scarcely seen, the other surrounded by a large spot of orange; posterior wing with more than the outer half orange, with one ocellus as in the male; the underside paler, without any of the lilac tint of the male. New Guinea.

MYCALESIS REMULIA, *Cramer, pl. 237*. Amboyna; Ceram; Mysol; Bouru; Waigiou; Salwatty; Batchian; Gilolo; Ternate; Morty Island.

MYCALESIS ASOPHIS, ♂, *Hewitson, Ex. But. iii*. Mycalesis, iv. figs. 20, 21. New Guinea; Waigiou; Mysol.

Var. *Male*. With the wings all dark brown; the posterior wing with four ocelli. Salwatty.

Female larger, paler brown; both wings rufous brown to the middle, much paler beyond the middle, the ocelli larger; the posterior wing

with four, five, or six ocelli, three or four of which are small and obscure. New Guinea; Aru; Mysol.

MYCALESIS PHIDON, ♂, *Hewitson, Ex. But.* iii. Mycalesis, iii. fig. 16. New Guinea; Aru; Mysol; Waigiou.

Female like the male, except that it is larger and of a much paler brown, and that the posterior wing has five ocelli. New Guinea.

MYCALESIS DEXAMENUS, *Hewitson, Ex. But.* iii. Mycalesis, iii. figs. 17, 18 (not 19). Tondano.

Var. *Female*. Without the black eye-like spot of the anterior wing; the underside much darker. Tondano.

MYCALESIS DORA, *Hewitson.*

Mycalesis Deianira, ♂, *Hewitson, Ex. But.* iii. Mycalesis, iii. fig. 13. Tondano.

Female. Like the male, except that it is larger, more obscure, with the whole of the posterior wing rufous brown. Sulla.

I have renamed this species, *Deianira* spelt "*Dejanira*" having been used before.

MYCALESIS DINON, ♀, *Hewitson, Ex. But.* iii. Mycalesis, iii. fig. 31.

Mycalesis Dexamenus, var., *Hewitson, Ex. But.* iii. Mycalesis, iii. fig. 19. Macassar.

I believed this species to be only a variety of *Dexamenus* until I obtained the male in Mr. Wallace's collection; the sexes are both alike.

MYCALESIS MAIANEAS, *Hewitson, Ex. But.* iii. Mycalesis, v. figs. 27, 28. Malacca; Sarawak.

MYCALESIS MYNOIS, *Hewitson, Ex. But.* iii. Mycalesis, v. figs. 29, 30. Timor.

MYCALESIS ANAPITA, *Horsfield & Moore, Cat. Lep. E. I. C.* p. 232. Sumatra; Sarawak.

MYCALESIS DINICHE, ♂, *Hewitson, Ex. But.* iii. Mycalesis, iv. fig. 23. Sumatra; Singapore; Sarawak.

Female. Like the male, but larger and much paler.

MYCALESIS MANIPA, *Boisduval, Voy. Astrolabe*, p. 150.

Mycalesis Daidis, *Hewitson, Ex. But.* iii. Mycalesis, iv. fig. 22. Bouru; Ceram; Sulla.

Female. Like the male, except that it is larger and has a distinct transverse band at the middle, and the outer margin much paler and the small ocelli more distinct.

MYCALESIS JOPAS, *Hewitson, Ex. But.* iii. Mycalesis, iv. fig. 24. Macassar; Tondano; Sulla.

MYCALESIS HESIONE, ♂, *Cramer*, pl. 11. 362. Macassar; Timor; Bouru; Sumatra; Sarawak; Flores; Morty.

Female. Like the male, except that it is a little larger and of a pale brown.

MYCALESIS LALASSIS, *Hewitson, Ex. But.* iii. Mycalesis, vi. fig. 35.
Amboyna; Singapore; Gilolo; Flores; Sulla.

MYCALESIS MINEUS, *Linn., Cramer.*

♂. *M. Justina, Cram. Pl.* 326. ♀. *M. Drusia, Cram. Pl.* 84. Macassar; Sumatra; Singapore.

The butterfly which I have described under the name of *M. Lalassis* may be only a variety of this species. I have thought it best to confine *M. Mineus* to the description of Linnæus, who says that the underside of the anterior wing has two ocelli, rather than allow it, as Godart does, to have four or five. It is true that when restricted to two ocelli these have sometimes two or three more minute immature ocelli attached to them. Except in *M. Polidecta* (the aberrant species of this genus) it will be best to allow but little variation for the ocelli.

MYCALESIS MEGAMEDE, *Hewitson, Ex. But.* iii. Mycalesis, iii. fig. 14.
Macassar; Gilolo; Batchian; Ternate; Sumatra; Malacca; Java.

Var. *Male*. With the underside pale, rufous, the ocelli larger and very black, the fifth ocellus of the anterior wing conspicuously large. Sulla.

This species may be readily known from all those most nearly allied to it by the undulated underside.

MYCALESIS OROATIS, *Hewitson, Ex. But.* iii. Mycalesis, vi. figs. 38, 39.
Java.

MYCALESIS NALA, *Felder, Wien. Ent. Monats.* (1859) iii. p. 403.

Mycalesis Mamerta, Horsfield & Moore, Cat. Lep. E. I. C. Museum, p. 231 (not *Mamerta* of *Cramer*).

MYCALESIS MNASICLES, *Hewitson, Ex. But.* iii. Mycalesis, v. figs. 32, 33.
Sumatra.

Gen. HYPOCYSTA, *Westwood.*

HYPOCYSTA OSYRIS, *Boisduval; Felder, Wien. Ent. Monats.* iv. pl. 3.
New Guinea; Aru; Mysol.

HYPOCYSTA HÆMONIA, *Hewitson, Ex. But.* iii. Satyridæ, fig. 1. Aru.

HYPOCYSTA HYGEA, *Hewitson, Ex. But.* iii. Satyridæ, figs. 2, 3. New Guinea; Aru; Dorey; Salwatty.

HYPOCYSTA HECAERGE, *Hewitson, Ex. But.* iii. Satyridæ, figs. 4, 5.
New Guinea.

Gen. ACROPHTALMIA, *Felder.*

ACROPHTALMIA ARTEMIS, *Felder, Wien. Ent. Monats.* v. p. 305. Batchian; Gilolo; Morty; Menado; Sulla.

Gen. YPHTHIMA, *Hübner.*

YPHTHIMA BALDUS, *Fabricius, Ent. Syst.* iii. p. 323. Singapore; Sumatra.
-Var. With the underside much paler. Macassar.

- YPHTHIMA FASCIATA, *Hewitson, Trans. Ent. Soc.* 3rd series, ii. p. 287. Sumatra.
- YPHTHIMA LORYMA, *Hewitson, Trans. Ent. Soc.* 3rd series, ii. pl. 18. figs. 16, 17. Macassar; Sarawak.
- YPHTHIMA PANDOCUS, *Horsf. & Moore, Cat. Lep. E. I. C. Museum*, p. 235 = *Hewitson, Trans. Ent. Soc.* 3rd series, ii. pl. 18. fig. 12. Java; Sarawak; Macassar.
- YPHTHIMA PHILOMELA, *Hübner, Zutr.* figs. 83, 84. Malacca.
- YPHTHIMA APHNIUS, *Godart, Enc. Méth.* p. 551; *Hewitson, Trans. Ent. Soc.* 3rd series, ii. pl. 17. figs. 8, 9. Timor.
- YPHTHIMA SEPYRA, *Hewitson, Trans. Ent. Soc.* 3rd series, ii. pl. 17. fig. 10. Batchian; Gilolo.
 Var. With the underside of the posterior wing white, slightly undulated with rufous brown. Flores.
- YPHTHIMA ARCTOUS, *Fabricius.* Aru.
- YPHTHIMA AMPHITHEA, *Ménétries, in Schrenck's Amur-Lande*, pl. 3. fig. 10. Sula.

Fam. ERYCINIDÆ.

Gen. ZEMEROS, *Boisduval.*

- ZEMEROS FLEGYAS, *Cramer.* From Java.
 Var. *Female.* With a broad transverse band of five conical spots beyond the middle of the wing. Malacca; Sarawak.
- ZEMEROS EMESOIDES, *Felder, Wien. Ent. Monats.* Band iv. p. 396. Malacca; Sumatra; Sarawak.

Gen. SOSPITA, *Hewitson.*

- SOSPITA STATIRA, *Hewitson, Ex. But.* iii. figs. 9-12. Mysol; Waigiou.
 Var. *Female.* Above with the transverse band of the anterior wing broader; the outer margin of the posterior wing broadly rufous orange. Below with the posterior wing of a bright rufous orange. Salwatty.
- SOSPITA SEGECIA, *Hewitson, Ex. But.* ii. pl. 46. figs. 4-6. Aru; Mysol.
- SOSPITA WALLACEI, *Hewitson, Ex. But.* iii. figs. 7, 8. Mysol.
- SOSPITA ECHERIUS, *Stoll*, pl. 31. figs. 1, 1a, 1b. Macassar.
 Var. *Male.* Much larger and darker, the bands on the wings scarcely seen.
Female with the transverse bands of the anterior wing broader, whiter, and nearer together. Menado.
 Var. S. (Abisara) *Kausambi*, *Felder, Wien. Ent. Monats.* Band iv. p. 397. Malacca; Sumatra; Singapore; Sarawak.
- There is a great difference in size between large examples of *S. Echerius* and *S. Kausambi*, but there is no other distinction.

SOSPITA SAVITRI (Abisara Savitri), *Felder, Wien. Ent. Monats.* Band iv. p. 397.

Sospita Susa, *Hewitson, Ex. But.* vol. ii. pl. 46. fig. 2. Sumatra; Singapore.

Gen. TAXILA, *Doubleday.*

TAXILA DRUPADI.

Emesis Drupadi, *Horsfield, Cat. Lep. E. I. C. Museum*, pl. 2. figs. 3, 3 a. Malacca; Sumatra; Singapore.

TAXILA ORPHNA, ♂, *Hewitson, Ex. But.* vol. ii. pl. 45. fig. 7.

Emesis Orphna, *Boisduval, Sp. Gen. Lep.* pl. 21. fig. 4.

Female. Above rufous-brown; anterior wing with the outer half carmine, crossed near the apex by a large orange spot. Below, as in the male. Sumatra; Singapore; Sarawak.

Var. Female. With a larger portion of the anterior wing carmine, the orange near the apex, the nervures and outer margin of the posterior wing carmine. Singapore.

TAXILA TELESIA, ♂, *Hewitson, Ex. But.* vol. ii. pl. 45. figs. 1, 2. Sumatra; Sarawak.

Female. Above, anterior wing carmine, marked by rays of dark brown: the base pale brown, crossed near the apex by a band of orange-yellow. Posterior wing rufous brown. Below, as in the male. Sumatra; Sarawak.

TAXILA TENETA, *Hewitson, Ex. But.* vol. ii. pl. 45. figs. 3, 4. Sarawak.

TAXILA PULCHRA, *Hewitson, Ex. But.* vol. iii., Taxila, ii. figs. 8-10.

Argynnis pulchra, Guérin, Voy. Coquil. pl. 16. figs. 2, 3. Waigiou.

TAXILA DECORATA, *Hewitson, Ex. But.* vol. iii., Taxila, ii. figs. 11-13. Aru; Dorey; Mysol.

Var. Male. Darker; the band of the anterior wing narrower, clouded. Dorey.

TAXILA THUISTO, *Hewitson, Ex. But.* vol. iii. pl. 45. figs. 5, 6. Sumatra; Singapore.

On the "Tsetse" Fly of Tropical Africa (*Glossina morsitans*, Westwood). By JOHN KIRK, M.D., F.L.S.

[Read Dec. 15, 1864.]

HAVING travelled in regions infested by the fly whose bite is reputed so deadly to cattle, I venture to bring before you a brief *résumé* of what is known regarding it, adding such observations as my own experience has suggested. I do so the more readily